

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of Masaki YANAGIOKA

Application No.: 10/599,151

Filed: September 21, 2006

For: RUBBER COMPOSITION FOR TIRE TREAD AND PNEUMATIC TIRE
USING THE SAME

Group Art Unit: 1796

Examiner: John Uselding

Confirmation No.: 5036

DECLARATION UNDER 37 C.F.R. § 1.132

I, Masaki Yanagioka, declare that:

I am the inventor of the above-captioned patent application.

I received my Master of Engineering from the University of Tokyo in 2001, and I have been employed by Bridgestone Corporation since 2001, where I have been engaged mainly in research and development of fillers for a tire. Further, I received my Ph.D. of Chemical Engineering from Stanford University in 2009.

I have made the following experiments in order to measure a CTAB surface area, a hydrogen desorption ratio and a toluene tinting permeability of CB-1, CB-2 and CB-3 described in Kikuchi et al. (US 5,484,836).

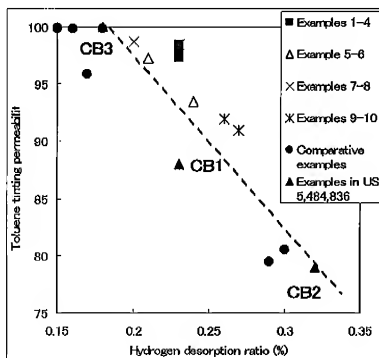
Experimental Procedure

CB-1, CB-2 and CB-3 described in US 5,484,836 are presently prepared under the operating conditions in the carbon black producing furnace shown in the following table. With respect to the resulting carbon blacks, the CTAB surface area, the hydrogen desorption ratio, and the toluene tinting permeability are measured according to the methods described in the specification of the present application. Results are also shown in the following table.

Table 1: Conditions and Results

		Presently prepared CB-1	Presently prepared CB-2	Presently prepared CB-3
Conditions for introducing stock oil	Introduction amount (kg/hr)	3300	3000	2600
Conditions for introducing air	Temperature (°C)	700	700	700
CTAB surface area (m ² /g)		80	90	100
$0.260 - 6.25 \times 10^{-4} \times (\text{CTAB})$		0.21	0.20	0.19
Hydrogen desorption ratio (%)		0.23	0.32	0.18
Toluene tinting permeability (%)		88	79	100

Further, the results obtained from the above tests and the results described in the present specification are summarized in the following graph.



(Summary)

As seen from Table 1, CB-1, CB-2 and CB-3 described in US 5,484,836 do not satisfy either of (1) a hydrogen desorption ratio $> 0.260 - 6.25 \times 10^{-4} \times \text{CATB}$ (wt%)

or (2) a toluene tinting permeability of not less than 90%. Therefore, Kikuchi et al. (US 5,484,836) fails to disclose the carbon black used in the present invention.

Further, as seen from the above graph, CB-1, CB-2 and CB-3 described in US 5,484,836 are not included in the upper right area where the carbon black used in the present invention are included, and thereby the properties of CB-1, CB-2 and CB-3 described in US 5,484,836 are notably different from those of the carbon black used in the present invention.

Consequently, it is confirmed that Kikuchi et al. (US 5,484,836) does not teach or suggest the present invention.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 7/2/2009 Declarant: Masaki Yanagioka
Masaki Yanagioka